

Technical Cybersecurity

The Stack

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CALL STACKS HAVE BEEN AROUND FOREVER

- ▶ Originally implemented in UNIX programs

USE VARIOUS CALLING CONVENTIONS

- ▶ Stack is accessed and used via specific rules

STORE DIFFERENT DATA BASED ON PROCESSOR

- ▶ MIPS, ARM, x86_32, x86_64 all differ

It's not Magic

COMPILERS

- Compilers take care of this for you

FUNCTION PROLOGUES

- Boilerplate at the beginning of functions

MEMORY LOCATIONS

- All we're doing with the stack is moving in memory

Dynamic Behavior

LOOK CLOSELY AT RUNTIME

- ▶ Where are variables stored?
- ▶ Where are arguments stored?
- ▶ Why or why not?
- ▶ And what are the side effects?

Next up, stack details.